

COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 7.00

AIR POLLUTION CONTROL REGULATIONS

310 CMR 7.00 APPENDIX B

U EMISSION BANKING, TRADING AND  
AVERAGING

**310 CMR 7.00: Appendix B: U Emission Banking, Trading and Averaging**

(1) Introduction. 310 CMR 7.00 Appendix B establishes principles and procedures which can be utilized by facilities to comply with the requirements of 310 CMR 7.18, 310 CMR 7.19 and 310 CMR 7.00 Appendix A. 310 CMR 7.00 Appendix B contains provisions to allow emission averaging or "bubbles" and provisions to allow for the creation and use of emission reduction credits to be "banked", used or traded among facilities.

(2) Definitions. The definitions found in 310 CMR 7.00 apply to 310 CMR 7.00 Appendix B. The following words and phrases shall have the following meanings as they appear in 310 CMR 7.00 Appendix B. Where a term is defined in the 310 CMR 7.00 definitions section and the definition also appears in 310 CMR 7.00 Appendix B, the definition in 310 CMR 7.00 Appendix B controls.

Actual Emissions means, the average rate, in tons per year, at which a unit actually emitted the pollutant during the two-year period which precedes the date of application and which is representative of normal production rates or activity levels. The Department shall allow the use of a different two year consecutive time period, within five years immediately prior to the date of application, upon a determination that the alternative two year period is more representative of normal source operation. Actual emissions shall be calculated using the eligible source's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.

Allowable emissions means the emissions rate of a source calculated using either the production or activity rates associated with the maximum rated capacity of the source, and the hours of operation or the permitted hours of operation or capacity provided that such permit is federally enforceable and so as not to exceed the following:

- (a) Any applicable standards set forth in 40 CFR Part 60 (NSPS) or 61 (NESHAPS);
- (b) Any applicable Massachusetts SIP emissions limitation including a limitation with a future compliance date; or

(c) Any emissions rate specified as a federally enforceable permit condition, including a limitation with a future compliance date.

Area Source means stationary and non-road sources of emissions who are too small and/or too numerous to be individually included in a stationary source emission inventory examples being home heating furnaces, aircraft, commercial vessels, gas stations and lawn mowers.

Baseline means the emission level set for an eligible source and calculated in accordance with methods described in 310 CMR 7.00 Appendix B (3)(f), which reflects the lower of actual emissions, or allowable emissions and which serves as the level below which emission reductions are considered surplus and can be eligible for approval by the Department as Emission Reduction Credits (ERC). As future allowable emission rates or emission standards become effective, the lowest of future allowable emissions, allowable emissions or actual emissions will be the baseline below which reductions must be made to be considered surplus.

Bubble means an alternative emission control strategy where two or more existing emission points are regarded as being placed under a hypothetical bubble, which is then regarded as a single emission source.

Curtailment means a permanent reduction in hours of operation or process rate, said reduction approved in a permit issued by the Department.

Direct Determination means a calculation or measurement based on source specific information rather than from estimates of emission and control efficiencies.

Eligible Source means any stationary, area or mobile source of VOC, NOx or CO emissions which is eligible to participate in emissions banking and trading at any point in time.

Emission Estimation means calculation of emissions using estimated emission factors and assumptions of control efficiency not based in whole or in part on actual measurement or detailed records for an emission unit.

Emission Limiting means a program or strategies that directly specify limits on total mass emission, emission related parameters (e.g., emission rates per unit of product) or levels of emission reductions that are required to be met by eligible sources.

Emission Reduction Credit (ERC) means the actual air pollutant reductions from an emitting source that have been certified by the Department as enforceable, permanent, quantifiable, real, and surplus in accordance with the requirements of 310 CMR 7.00 Appendix B.

Emission Reduction Credit Banking System means the system, established by the Department, which upon satisfaction of all applicable requirements of this rule, Emission Reduction Credits may be deposited and withdrawn for use.

Emission Reduction Credit Certificate means that document evidencing the Department's approval of an Emission Reduction Credit. The Certificate is the document that describes the amount and type of emission reduction credit granted by the Department to the person owning, leasing, operating or controlling the facility where emission reductions have been approved as ERCs, and sets out on its face, what limitations may apply. Said document shall be negotiable between buyers and sellers but can not be used until Department approval of the use has been obtained.

Enforceable means those limitations and conditions which are enforceable by the Department of Environmental Protection and the EPA. Examples of such enforceable mechanisms include, but are not limited to the following:

- (a) Conditions in pre-construction permits issued pursuant to 40 CFR 52.21 (federal delegated PSD programs); or
- (b) Limitations developed pursuant to 40 CFR Parts 60 (NSPS) and 61 (NESHAPS); or
- (c) Requirements contained in the EPA-approved Massachusetts State Implementation Plan (SIP), or source-specific SIP revisions that are approved by EPA; or
- (d) Conditions in pre-construction "plan approvals" issued by the Commonwealth of Massachusetts, provided that those pre-construction "plan approval" regulations have been approved by the EPA in the Federal Register as meeting the requirements of 40 CFR 51.160.
- (e) Permits issued pursuant to generic bubble regulations that have been approved by EPA as adhering to the December 4, 1986, Emissions Trading Policy Statement.

Future Allowable means the maximum emission rate, process rate or activity level assumed in the most recent Department adopted State Implementation Plan for Ozone or State Implementation Plan for Carbon Monoxide. An example might be the future allowable (1994) emission rate for Leather Coating operations at 27.4 pounds of VOC per gallon of solid applied [310 CMR 7.18(22)] which when applied to the two year average capacity utilization factor and two year average hours of operation for an eligible source, would result in the estimate of baseline starting on the rule effective date in 1994. Prior to this effective date, credit is calculated using a baseline that includes the lower of actual or allowable emissions at the time of application.

Irreversible Process Change means a process modification or equipment substitution that completely and irreversibly eliminates key emitting properties of the emission unit. For example, elimination of solvent use in a process line.

Netting means the mechanism used to secure an exemption of modifications at existing stationary sources from preconstruction permit requirements under 310 CMR 7.00 Appendix A (Emission Offsets and Nonattainment Review) and/or 40 CFR 52.21 (Prevention of Significant Deterioration) regulations which apply when there is a significant net emissions increase.

Non-inventoried Emission Source Category means air pollutants emitted into the ambient air from any source category which has not been included in the Department's 1990 emission inventories.

Offset means the use of an Emission Reduction Credit to compensate for emission increases of a nonattainment pollutant from a new major stationary or modified major stationary source subject to the requirements of 310 CMR 7.00: Appendix A .

Permanent means that emission reductions implemented for the purpose of generating Emission Reduction Credit must be assured for the life of the corresponding Emission Reduction Credit through a federally enforceable mechanism.

Program Baseline means the level of emissions, or emission related parameters for each eligible source or group of sources from which the program results (e.g. quantifiable emission reductions) shall be determined. For purposes of 310 CMR 7.00 Appendix B, the program baseline shall be the 1990 Base Year Emission Inventory of Volatile Organic Compound, Oxides of Nitrogen and Carbon Monoxide.

Quantifiable means that the amount, rate, and characteristics of an emission reduction can be measured through a replicable method acceptable to the Department of Environmental Protection and the EPA.

Real means the reduction in actual emissions released into the air.

Replicable means methods which are sufficiently clear and unambiguous such that the same or equivalent results would be obtained by the application of the methods by different users.

Shutdown means the earlier of (1) the date that the Department verifies that the source is shutdown or 2) the date that operations and emissions from an emitting unit ceased and the associated emission units have been removed or rendered inoperable.

State Implementation Plan (SIP) means the most recently prepared plan or revision thereof required by the Clean Air Act, 42 USC Section 7410, which has been either adopted by the Department and submitted to the United States Environmental Protection

Agency (EPA) for approval or approved by the United States Environmental Protection Agency (EPA), whichever is more stringent.

Surplus means, emission reductions beyond an established source baseline which, as such, are not required by the Department adopted SIP, relied upon in any applicable attainment demonstration, or credited in any RFP or milestone demonstration.

Transfer means the conveyance of ownership of an Emission Reduction Credit from one entity to another.

Use for the purposes of 310 CMR 7.00 Appendix B , the term "use" shall mean to employ for emission averaging or emission trading an ERC such that the person who owns or controls the ERC has received a plan approval from the Department which factors the ERC into the emissions from the facility for purposes of compliance with emission limitations or emission offset requirements.

(3) Emission Reduction Credit Banking and Trading.

(a) Introduction and statement of purpose.

1. The goal of the program, defined by 310 CMR 7.00 Appendix B(3), is to encourage the creation and trading of surplus emission reductions as Emission Reduction Credits (ERC) for purposes of offsets, netting and cost effective compliance without interfering with any applicable requirements concerning attainment, reasonable further progress or any other applicable air pollution control requirement. As such, 310 CMR 7.00 Appendix B(3) is intended to promote innovative and cost effective approaches to emission reduction requirements adopted by Massachusetts. This program is being adopted as an "Economic Incentive Program" pursuant to EPA's interim guidance on Economic Incentive Programs 58 FR 11110.
2. Pursuant to guidance from the U.S. EPA, the program described herein is considered emission limiting in that actions taken pursuant to this section shall place limits on total mass emission, emission related parameters, or specify levels of emission reductions that eligible sources who choose to participate shall be required to meet.
3. This program is related to the stated goal in that it establishes a federally enforceable permit mechanism to ensure the enforceability of the emission reduction credits (ERCs) so that the use of ERCs will not interfere with attainment or maintenance of the NAAQS or cause or contribute to a condition of air pollution.

(b) Program Scope.

1. 310 CMR 7.00 Appendix B(3) applies to the owner/operator of eligible sources including stationary sources, area sources and mobile sources who apply for certification of surplus emission reductions as emission reduction credits (ERC).
2. Entry into this program is voluntary.
3. Where allowed by 310 CMR 7.00 Appendix A including subsection (6), other Massachusetts Department of Environmental Protection ("Department") regulations, and Federal rules and regulation. Emission Reduction Credits (ERC) may be banked for later use in bubbles, for netting, offsets or transferred to other sources for use in bubbles or offsets, or netting, where applicable.
4. Where ERCs are used for netting, the following rules apply:
  - a. ERC must be generated at the same stationary source and,
  - b. ERC must be used for netting within five years of the reduction.
5. Certified ERCs can be traded between emission sectors (e.g. from mobile sources to stationary sources) provided that credit generated by stationary source reductions may under no circumstances be used to comply with any mobile source requirement.
6. Use of Emission Reduction Credits generated by this program shall not be used to meet the requirements of, or result in violation of New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPS), the requirements for Lowest Achievable Emission Rate (LAER), the requirements for Best Available Control Technology (BACT), New Source Performance Standards. National Emissions of Hazardous Air Pollutant Standards. Maximum Achievable Control Technology (MACT) or cause a violation of a National Ambient Air Quality Standards.
7. Nothing in 310 CMR 7.00 Appendix B shall require that emission reduction credits be transferred through the emissions banking system if the emission reduction credits are transferred to other facilities operated or owned, in whole or part, by the creator of the emission reduction credit, provided that the requirements of 310 CMR 7.00 Appendix B(3)(j) are met prior to use of the ERC.
8. Nothing in 310 CMR 7.00 Appendix B shall require that emission reductions, created for the purpose of offsets, be submitted for approval

through the emission banking program if the emission reductions are used by the facility or within facilities owned by the same economic entity which created the emission reductions provided that the requirements of 310 CMR 7.00 Appendix A are met.

(c) General Principles which apply to the creation of Emission Reduction Credits (ERC).

1. Emission reductions generated for the purpose of creating emission reduction credit must meet, at minimum, all of the following principles, to receive approval as emission reduction credits.
  - a. The reductions must be reductions of emissions of: Volatile Organic Compounds (VOC), Oxides of Nitrogen (NO<sub>x</sub>), or Carbon Monoxide (CO);
  - b. The reductions must have occurred after December 31, 1990.
  - c. The reductions must be "surplus" in that they are reductions in emissions below baseline established for the eligible source.
  - d. The reductions must be permanent and the amount and duration of the reduction must be documented; and,
  - e. The reductions must be quantifiable and enforceable with a replicable basis for calculating the amount of reduction as well as reliable methods for assessing compliance with the emission rates after the reduction has been made.
2. Emission reductions can not be recognized as ERCs if said reductions are required by Federal or Department permits or plan approvals, agreements, administrative or judicial orders, or other enforcement actions or regulations.
3. Emission reductions can only be eligible as ERCs if said reductions occur from emissions sources within the geographical boundaries of Massachusetts.
4. Emission reductions shall be recognized as ERCs only after the approval of the Department has been obtained in accordance with 310 CMR 7.00 Appendix 5(3)(h).

(d) Eligible ERC Generating Measures.

1. Emission reductions eligible for credit are those emissions reductions below baseline for the eligible source.

2. Emission reductions considered eligible for consideration as ERCs include:

a. Shutdown or curtailment provided that the applicant can demonstrate to the satisfaction of the Department that demand for the services or product will not or cannot shift to other similar sources in the State resulting in no net decrease in emissions from the source category.

b. Controls of an emission unit beyond that required by Massachusetts Air Pollution Regulations or federal law and regulations, such as but not limited to:

i. the application of greater operating efficiencies,

ii. the application of a more efficient control technology;

iii. the application of toxics or materials use efficiencies consistent with the principals of the Toxics Use Reduction Act.

iv. fuel switching

v. any other controls not specifically mentioned

c. Seasonal Controls with the recognition that VOC and NO<sub>x</sub> emission reductions created by the application of seasonal controls will be subject to use restrictions as defined in 310 CMR 7.00 Appendix B(3)(j)7.

d. Early implementation of future emission controls listed as future attainment measures or contingency measures in the Department adopted SIP provided that these reductions are surplus only up to the effective date for compliance with the program or emission limitation described in the SIP. To the extent the generic procedures contained in 310 CMR 7.00 Appendix B are approved by the U.S. EPA, emission reductions achieved by implementing a program earlier than the compliance deadline for that program, are eligible for consideration as ERCs and but credit will cease to accrue upon the effective date of the future control. Credit already accrued by early implementation of the program will not be affected nor will its use be limited beyond the limits defined by



310 CMR 7.00. (Example: implementing the clean fueled fleet program in 1994 where the deadline is 1998 has the potential to accrue ERC for four years).

e. Emission reductions which result from application of mobile and area source controls are eligible for consideration as ERCs provided that the reductions meet all other requirements of 310 CMR 7.00 Appendix B including provisions for establishment of baseline and replicable quantification as well as compliance monitoring methods.

f. Measures to reduce consumer demand for energy shall be eligible for consideration as potential ERCs provided that the reductions meet all other requirements of 310 CMR 7.00 Appendix B including provisions for establishment of baseline and replicable methods of quantification as well as compliance monitoring methods and to the extent the applicant can demonstrate, to the satisfaction of the Department that demand for the energy will not or cannot shift to other similar sources resulting in no net decrease in emissions from the source category (i.e. power generating facilities).

3. Emission reductions are not eligible for consideration as an ERC if said reductions are generated by an un-inventoried area source category (e.g., small bakeries) or if said reductions are generated by biogenic sources (e.g., trees).

(e) Application for Certification of an ERC.

1. An Emission Reduction Credit can only be certified through a DEP approval process and issuance of an enforceable permit to operate to the applicant which incorporates limits on operations, activity level or emissions that must be maintained to assure the integrity of the ERC.

2. For emission reductions implemented prior to January 1, 1994, an Emission Reduction Credit Application must be submitted to the Department within nine months of said date.

3. For emission reductions implemented after January 1, 1994, an Emission Reduction Credit Application must be submitted within six months after the emission reduction has been implemented.

4. An application for certification of an ERC may be submitted in advance of the time when the reduction is actually made.

## 5. Application Procedures.

- a. Any person who owns or operates an emission unit at which an eligible emission reduction has occurred or will occur may submit an Emission Reduction Credit (ERC) Application in accordance with the requirements of 310 CMR 7.00 Appendix B(3).
- b. The ERC Application shall be submitted on a standard form supplied by the Department with documentation provided by the applicant as to the calculation method for baseline and the proposed ERC as required by 310 CMR 7.00 Appendix B(3)(f) and (g) as well as a proposed method for determining and assuring compliance.
- c. A single application must be made for each emission reduction (single or multiple pollutant) related to a single eligible source or series of connected emission units within an eligible source related to manufacture of a single product. For example, emission reductions made at a process line and at a boiler within the same facility require two applications for ERC certification.
- d. Applications for ERC certification shall express emission reductions in pounds on a daily basis and will indicate the time period associated with the proposed ERC if said ERC is seasonal.
- e. Applications for ERC certification shall contain sufficient information to allow for adequate evaluation of each emission reduction consistent with the requirements of 310 CMR 7.00 Appendix B(3)(f) and (g) as well as a schedule for implementing the reduction and associated compliance assurance measures such as monitoring, recordkeeping and reporting procedures.
- f. Applicants may claim confidentiality of information contained in the ERC Application as provided by 310 CMR 3.00 et seq. and Section 114(c) of the Clean Air Act.
- g. The application for ERC certification shall be signed by the a responsible official as applicant certifying that emission reductions will be created and maintained as proposed.

### (f) Source Baseline.

- 1. In order to establish the amount of emission reduction which is surplus and thus eligible for credit, baseline must be established for each source where a reduction is proposed and certification of an ERC is requested.

2. Baseline will be expressed in pounds of pollutant emitted per day and can be further defined by season or month (e.g. May through October) if the planned reduction is seasonal in nature.

3. Baseline will be established for each stationary source according to the following formula:

$$\text{baseline} = \text{ER} \times (\text{CU} \times \text{H})$$

Where:

ER equals the emission rate as determined by RACT, BACT or other applicable limit contained in a Department adopted Ozone or Carbon Monoxide SIP revision, or federal emission limit.

ER must be lower of actual, or allowable emission rate and shall be expressed as mass of emission per unit of production or thruput (e.g., pounds of VOC per gallon of solids applied or pounds of NOx per million Btu)

CU equals the average hourly capacity utilization (e.g., expressed in terms of millions of Btu per hour or numbers of gallons of solids applied in an hour)

H equals the number of hours of operation per day

CU and H are based on average historical values for the factors for the two year period preceding the application. The department shall allow use of a different two consecutive year period, within 5 years immediately prior to (but since 1990 the date of application, upon determination that the alternative two year period is more representative of normal source operation.

4. Baseline will be established for each area source measure according to the following formula:

$$\text{baseline} = \text{ER} \times \text{ACT}$$

Where:

ER equals the emission rate as determined by the Department and EPA in the most recent emission inventory using EPA approved methods and emission factors including AP-42 and Volume IV for Area Source, or the EPA Off-road Study for off-road sources. Assumptions shall be consistent with the most recent adopted periodic emission inventory prepared by the Department.

ER must be lower of actual, or allowable emission rate and shall be expressed as mass of emission per unit of production or thruput (e.g., pounds per 1000 gallons burned or pounds per capita, as is appropriate)

ACT equals the average activity factor expressed in a manner so as to be consistent with the units required by the emission rate such as number of gallons burned, or number of persons affected.

5. Mobile Source.

a. For computation of baseline from mobile source measures and generation of ERCs by implementation of strategies to accelerate vehicle retirement, implement clean technology buses or other vehicles, or implement employee trip reduction, the recommended quantification methods contained in the following EPA documents shall be used:

i. Interim guidelines on the Generation of Mobile Source ERC, 58 FR 11134

ii. Guidance for Implementation for Employee Commute Option Programs, U.S. EPA, January 1993

iii. Guidance for Emission Reduction Credit Generation by Clean Fuel Fleets and Vehicles, January 1993

iv. Guidance for Implementation of Accelerated Retirement of Vehicle programs, U.S. EPA, February 1993

v. Program for Generation of Emission Credits by Urban Buses, U.S. EPA, January 1993

vi. Other EPA Guidance as it becomes available.

b. The applicant shall consult with the Department and EPA in defining baseline and establishing the assumptions to be used in determining baseline. The first such application that contains this calculation shall require a specific revision to the SIP. Any subsequent applications which follow approval into the SIP of the initial application for mobile source ERCs shall be consistent with the method and assumptions used in the approved SIP revision.

6. Quantification of baseline should be conducted consistently with the replicable methods enumerated in 310 CMR 7.00 Appendix B(3)(g) including those methods developed through the Northeast Demonstration

Project on Emissions Trading to the extent that these methods are approved for use by the U.S. EPA.

(g) Quantification of ERC.

1. Emission Reduction Credits shall be quantified to an average hourly or daily emission rate expressed in pounds.
2. Quantification of an ERC shall be done following a two step process including quantification of the base credit and adjustment of the base credit for compliance assurance. The ERC amount is the result of complete application of these two steps.
3. Step 1 : Defines the base credit. Creditable, workable and replicable methods must be used to establish baseline and quantify base credit reflecting the real emission reduction below baseline. Acceptable replicable methods must include the following, as appropriate, for the specific ERC application:
  - a. Direct measurement of emissions by use of a test method contained in 40 CFR Part 60, Appendix A.
  - b. Calculation equations which are a function of process and control equipment parameter, mass-balance calculations which are a function of inventory, usage and disposal records, activity levels and/ or throughput and production consistent with good engineering practice and methods described in the Air Pollution Engineering Manual ISBN 0-442-00843-0.
  - c. Use of EPA approved emission factors and emission calculation methods described in "Compilation of Air Pollutant Emission Factors, EPA, AP-42 Volume 1: Stationary and Area Sources, including the most recent supplements at the time of application; "Guidance for Procedures for Emission Inventory preparation, Volume IV: Mobile Sources, U.S. EPA 450/4-81-02, as is appropriate for the application under consideration.
  - d. For mobile source credit certification from strategies to accelerate vehicle retirement, implement clean technology buses or other vehicles, or implement employee trip reduction, the recommended quantification methods contained in the following EPA documents shall be used:
    - i. Interim guidance on the generation of mobile source ERCs, 58 FR 11134

- ii. Guidance for Implementation for Employee Commute Option Programs, U.S. EPA, January 1993
  - iii. Guidance for Emission Reduction Credit Generation by Clean Fuel Fleets & Vehicles, January 1993
  - iv. Guidance for Implementation of Accelerated Retirement of Vehicle programs, U.S. EPA, February 1993
  - v. Program for Generation of Emission Credits by Urban Buses, U.S. EPA, January 1993.
  - vi. Other EPA Guidance as it becomes available
- e. For mobile source ERCs, the applicant shall consult with the Department and EPA in calculating the base credit and establishing the assumptions to be used in said calculation. The first such application that contains this calculation shall be subject of a specific revision to the SIP. Any subsequent applications, which follow approval into the SIP of the initial application for mobile ERCs, shall be consistent with the method and assumptions used in the approved SIP revision.
- f. Emission reductions from application of Demand Side Management (DSM) actions shall be subject to special conditions and procedures as follows:
- i. Eligible applicants for DSM ERCs include power generating facilities of public utilities and utility/private partnerships who are regulated by the Massachusetts Department of Public Utilities.
  - ii. If a DSM project is conducted by multiple parties, multiple ERC certificates shall be issued for each owner's proportional share based on the proportion of investment by each owner.
  - iii. Base credit for DSM shall be determined after implementation of these DSM measure(s) and based on review of historical records covering a period of no less than one year collected since implementation, and shall be calculated in conformance with guidance provided and approved by the Massachusetts DPU.

iv. Once the base credit has been certified the applicant is responsible for ensuring that the credit will be maintained.

v. The initial application for ERCs base on application of DSM shall have the protocols used to quantify DSM-generated ERCs approved by EPA. All subsequent applications for DSM generated ERCs shall use the protocol approved for the initial application.

g. Additional replicable quantification methods developed through the New England Demonstration Project on Emission Trading. Quantification protocols developed through this study shall be subject to review and approval by the U.S. EPA prior to their use as replicable methods.

4. Step 2 : Once the base credit has been established an adjustment shall be made reflecting the method of compliance assurance

a. The compliance assurance multiplier is based on the measures the applicant proposes to implement to assure continuous compliance with the terms of the ERC certification. The principle behind the compliance assurance multiplier is from U.S. EPA's "Guidance for Estimating and Applying Rule Effectiveness for Ozone and Carbon Monoxide State Implementation Plan Base Year Inventories", U.S. EPA, November 6, 1992.

b. Emission reductions will be certified by the Department as emission reduction credit after application of a compliance assurance multiplier. The applicable compliance assurance multiplier will be determined by the Department within the ranges provided in the table below. Actual ERC adjustment will be set for individual circumstances and conditions within these ranges

<u>Method of Compliance Assurance</u>	<u>Compliance Assurance Multiplier</u>
Irreversible process change	: 0
Compliance Assessment by Direct Determination:	
Mass Balance Reconciliation	0.85 – 0.99
Continuous Emission Monitoring (CEM)	0.80 – 0.95
Compliance Assessment by Testing:	
Periodic Stack Test / Emission Test	0.80 – 0.90
Testing of Capture Efficiency and control	

Emission Determinations using estimates of capture and control and/or emission factors

0.50 – 0.80

5. Once the two step calculation has been completed, the resulting ERC shall not be subject to adjustment of value.

(h) Procedure For Certification of Emission Reductions.

1. Approval Procedures.

- a. Once an application for certification of an ERC has been submitted to the Department. DEP shall conduct completeness review within 30 days. Once a finding of completeness has been made. DEP shall conduct technical review of the application and shall attempt to render a decision on the application within 90 days of the finding of completeness. Should technical information be deficient, or the technical review find the application does not meet the terms and conditions of 310 CMR 7.00 Appendix B, the application shall be denied.

- b. The Department shall only grant approval of an ERC Certificate upon a finding that the ERC application meets the general and specific criteria contained in 310 CMR 7.00 Appendix B. The ERC-creating source shall be subject to enforceable permit conditions containing specific operational and emission limitations, which ensure the emission reductions will be provided for in accordance with the provisions of 310 CMR 7.00 Appendix B.

2. Approval of an ERC certificate and the associated compliance assurance protocols shall result in the issuance of an emission limiting operating permit which would become federally enforceable upon approval by EPA. Individual permit approval by EPA will not be required once EPA has approved 310 CMR 7.00 Appendix B unless in its approval of 310 CMR 7.00 Appendix B, the U.S. EPA requires otherwise.

3. In order for an emission-limiting operating permit issued pursuant to 310 CMR 7.00 Appendix B(3) to be made federally enforceable, it must contain the specific quantifiable emission limits reflecting the change in emission rate and reflecting the operating conditions, emissions and other measures taken to generate the ERC. All emissions limitations, controls, and other requirements imposed by such permits must be at least as stringent as all other applicable limitations and requirements contained in the SIP, enforceable under the SIP, or otherwise federally enforceable. All limitations, controls, and other requirements imposed by such permits



must be permanent, quantifiable, and otherwise enforceable as a practical matter.

4. Applicants for ERC certification of emission reductions derived from a single reduction at a single eligible source may apply for, and receive, single or multiple ERC Certificates. Multiple ERC Certificates shall be issued for each owners' proportional share or on some basis as requested by the owner or operator, at the discretion of the Department.

5. A source having ownership of an emission reduction credit has the exclusive right to possess and dispose of the Emission Reduction Credit subject to restrictions contained in the certification approval and 310 CMR 7.00 Appendix B(3), as may be applicable.

6. After adoption and implementation of the Massachusetts Operating permit program at 310 CMR Appendix C and approval by EPA pursuant to 40 CFR Part 70, approval of an ERC certificate for an applicant and user subject to operating permits will be incorporated into the operating permit pursuant to the provisions of 310 CMR 7.00 Appendix C.

7. A Certified ERC shall be valid for the life of the surplus emission reduction on which it was based and shall not "expire" or cease to exist after a set period of time, even if not traded or used.

(i) Confirmation of Emission Reduction Credits.

1. In order to confirm emission reductions claimed in conjunction with an application for an Emission Reduction Credit, the Department will require sources to implement compliance assurance methods such as monitoring, recordkeeping and reporting as defined by the applicant and approved or developed by the Department as part of the ERC certification approval.

2. The Department may also require the applicant to conduct source testing utilizing Department and EPA approved test methods, including but not limited to those methods referenced in 40 CFR Part 60, 310 CMR 7.00 Appendix A, 310 CMR 7.18(2), or 310 CMR 7.19 (14) as is appropriate for the eligible source.

3. In addition, the Department may require regular submittal of information including but not limited to production records, fuel use records, or any other appropriate means of measurement, on a monthly or quarterly basis, the Department determines is necessary to maintain the integrity of the ERC in conjunction with testing or during periods where testing is not conducted.

(j) Withdrawal, Transfer, and Use of Emission Reduction Credits.

1. The Department must issue a federally enforceable permit to a person seeking to use ERCs prior to the use of any Emission Reduction Credit. This includes permits to construct or operate issued to stationary sources and a practical equivalent to be issued to persons who have applied to use ERCs in area and mobile source situations.
2. Persons seeking to use ERCs must obtain an amount of credit equal to five percent more than the amount needed for offset or compliance calculation. This five percent increment shall be held by the applicant and not used until such time that the Department determines whether or not the excess credit can be released for use. Such a determination shall be made by the Department on or about January 1, 1999.
3. Use of an Emission Reduction Credit may not be used to meet the requirements of, or result in violation of federal New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPS), the requirements for Lowest Achievable Emission Rate (LAER), the requirements for Best Available Control Technology (BACT), Maximum Achievable Control Technology (MACT), cause a violation of a National Ambient Air Quality Standard for criteria pollutants, cause a violation of a PSD increment or create a nuisance condition.
4. ERCs may not be used to comply with performance standard established by regulation such as operating procedure requirements (e.g. covers on degreasers, operating within a specific temperature range) or to comply with requirements for record keeping, reporting or facility testing as may be required by the Department.
5. Use of an ERC can not exceed the rate at which said ERC is generated averaged on a calendar month basis. For example, if the ERC is for 120 pounds per day, ERC use can be at a rate no greater than 120 pounds per day or an average rate of 120 pounds per day for the calendar month. The rate of use can be less than the rate of generation (e.g. 60 pounds per day)
6. ERCs generated through emission reductions of one pollutant can not be used for trading or averaging with another pollutant.
7. ERCs generated by the use of seasonal control of ozone precursors (VOC and NOx) during the period May 1- September 30, can be used at any time during the calendar year. ERCs generated by using seasonal control of ozone precursors during the period October 1 through April 30, can only be used in the same season as generated (October 1 through April

30). ERCs generated by the use of seasonal control of carbon monoxide during the period November 1- February 28, can be used at any time during the calendar year. ERCs generated through use of seasonal control of carbon monoxide during the period March 1 through October 31 can only be used in the in the same season as generated (March 1- October 31).

8. Emission reductions that result from shutdown or curtailment of an emission unit where the emitting operations are shifted to another facility outside of Massachusetts, are eligible for consideration as ERCs for use only in Massachusetts.

9. Emission Reduction Credits may be transferred or used in whole or in part, subject to approval as provided for by 310 CMR 7.00 Appendix B(j).

(k) Interstate Trading of ERCs. (Reserved)

(l) Program audit and reconciliation.

1. The Department shall maintain records of banked ERCS and shall account for them periodically as "emitted" within the context of RFP and periodic emission inventory reports so as to ensure that the Emission Trading Program will not interfere with Reasonable Further Progress toward attainment of the NAAQS.

2. The Department shall conduct an audit of the emission trading program beginning in 1995 and every three years thereafter to ensure that the program is providing expected performance in regards to the handing of applications for ERC approval and certification as well the legitimacy of approved ERCs. Such audits shall include review of ERC approval protocols, confirmation of compliance at the affected sources which created ERCs, and compliance assessment of sources who are using ERCs for purposes of offsets, netting or compliance. Said Department audits shall be conducted in conformance with the Emission Trading Audit program guidelines developed by the Department and submitted to EPA.

3. Should an audit reveal the need to make program revisions, the Department shall, within six months of the audit findings, propose the appropriate program revisions for incorporation to the program.

4. The results of Department audits and the audit findings shall be reported in the context of required RFP and periodic inventory reports (every three years).

5. Program Baseline for this program is the 1990 Base Year Emission inventory of Volatile Organic Compound, Oxides of Nitrogen and Carbon Monoxide and the State Implementation Strategy Plan submittal of November 15, 1993 which describes programs and strategies to be used by the Commonwealth to attain and maintain NAAQS for ozone and Carbon Monoxide. Source baseline as described in previous sections is defined within the context of the program baseline (the lower of actual, allowable or future allowable emissions) so as to avoid interference with attainment and maintenance of NAAQS.

(m) Emission Reduction Credit Registration and Bank.

1. Upon satisfaction of all applicable requirements of 310 CMR 7.00 Appendix B, approved emission reduction credits shall be registered in the Emission Reduction Credit Banking System. Such a system may include, but is not limited to, a computerized register maintained by the Department of Environmental Protection to include:

- a. Name of owner, address of owner and contact person
- b. Pollutant associated with ERC
- c. Amount of ERC expressed in pounds per day
- d. Any seasonal restrictions on the ERC

2. Information related to an emission reduction credit maintained in the emission banking system shall be available for public review.

(4) Emission Averaging (Bubble). (Reserved)

(5) Enforcement.

(a) The Department shall enforce the provisions of 310 CMR 7.00 Appendix B under applicable law and regulations.

(b) For purposes of 310 CMR 7.00 Appendix B(3), a violation of the emission limitation provisions of any permit issued or modified to reflect the creation of an emission reduction credit shall be enforced at the point of ERC creation.